CLAIMS

1. Apparatus for processing image data defining a plurality of input images of a scene recorded at different times to generate data for defining a sequence of images conveying an evolving representation of the scene between the times at which the first and last input images were recorded, the apparatus comprising:

an image registerer for registering the input images; and

a pixel value interpolator for interpolating between the pixel values of the registered input images to generate pixel values for interpolated images for the image sequence.

2. Apparatus according to claim 1, wherein the image registerer comprises:

a transformation calculator for calculating transformations to transform the input images; and

a transformation applicator for using the transformations calculated by the transformation calculator to register the input images.

3. Apparatus according to claim 2, wherein the transformation calculator comprises a matcher to match

features in the input images and a calculator for calculating the transformations on the basis of the matched features.

4. Apparatus according to claim 2, wherein the transformation calculator comprises an input-signal processor for processing signals input by a user defining matching features in the input images to calculate the transformations.

5. Apparatus according to claim 1, wherein the pixel value interpolator is arranged to generate the pixel values for the interpolated images using linear interpolation.

6. Apparatus according to claim 1, wherein the pixel value interpolator is arranged to generate pixel values for interpolated images to be displayed in the image sequence in which each input image is to be displayed a plurality of consecutive times.

7. Apparatus according to claim 1, further comprising an overlap detector arranged to process input images registered by the image registerer to determine an area of overlap thereof, and wherein, the pixel value

interpolator is arranged to interpolate between the pixel values for pixels in the area of overlap only.

8. Image processing apparatus for generating data for a time-lapse sequence of images, comprising:

a transformation calculator for calculating transformations to register input images recorded with different viewing positions and/or viewing directions; and

an image data generator for using the input images and the calculated transformations to generate data for images to be displayed in the sequence.

9. A method of processing image data defining a plurality of input images of a scene recorded at different times to generate data for defining a sequence of images conveying an evolving representation of the scene between the times at which the first and last input images were recorded, the method comprising:

registering the input images; and

interpolating between the pixel values of the registered input images to generate pixel values for interpolated images for the image sequence.

10. A method according to claim 9, wherein the step of

registering the images comprises:

calculating transformations to transform the input images; and

using the transformations calculated in the transformation calculating step to register the input images.

11. A method according to claim 10, wherein, in the step of calculating transformations, features in the input images are matched and the transformations are calculated on the basis of the matched features.

12. A method according to claim 10, wherein, in the step of calculating transformations, signals input by a user defining matching features in the input images are processed to calculate the transformations.

13. A method according to claim 9, wherein, in the step of interpolating, the pixel values for the interpolated images are generated using linear interpolation.

14. A method according to claim 9, wherein, in the step of interpolating, pixel values are generated for interpolated images to be displayed in an image sequence in which each input image is to be displayed a plurality

of consecutive times.

15. A method according to claim 9, further comprising the step of processing registered input images to determine an area of overlap thereof, and wherein, in the step of interpolating, the pixel values for the interpolated images are generated for the area of overlap only.

16. A method according to claim 9, further comprising the step of generating a signal conveying data from which the sequence of images can be generated.

17. A method according to claim 16, wherein the signal comprises image data.

18. A method according to claim 16, further comprising the step of recording the signal either directly or indirectly.

19. A method according to claim 9, further comprising the step of displaying the sequence of images.

20. An image processing method for generating data for a time-lapse sequence of images, comprising:

calculating transformations to register input images recorded with different viewing positions and/or viewing directions; and

using the input images and the calculated transformations to generate data for images to be displayed in the sequence.

21. A storage device storing computer-useable instructions for causing a programmable processing apparatus to become operable to perform a method according to at least one of claims 9 to 20.

22. A signal conveying computer-useable instructions for causing a programmable processing apparatus to become operable to perform a method according to at least one of claims 9 to 20.

23. Apparatus for processing image data defining a plurality of input images of a scene recorded at different times to generate data for defining a sequence of images conveying an evolving representation of the scene between the times at which the first and last input images were recorded, the apparatus comprising:

registration means for registering the input images; and

interpolating means for interpolating between the pixel values of the registered input images to generate pixel values for interpolated images for the image sequence.

24. Image processing apparatus for generating data for a time-lapse sequence of images, comprising:

means for calculating transformations to register input images recorded with different viewing positions and/or viewing directions; and

means for using the input images and the calculated transformations to generate data for images to be displayed in the sequence.